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AN INVESTIGATION OF STUDENT SELECTION PRACTICES
IN EDMONTON COMPOSITE HIGH SCHOOLS

by

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A THESIS

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ABSTRACT

This study was designed for the purpose of investigating the methods and procedures of student selection practices in Edmonton composite high schools. An attempt was also made to estimate the efficiency of these selection methods and procedures.

Information and data required for the first part of the study concerning methods and procedures of student selection practices were collected by means of interviews with principals or assistant principals of the composite high schools. Ten composite high schools in the city of Edmonton were included. In estimating the efficiency of selection methods and procedures, one composite high school with a large enrollment and offering a wide range of programs was selected as a sample. 601 students enrolled in grade X in the school year 1965-1966 were included and were traced up to grade XII in the school year 1967-1968.

Information and data concerning methods and procedures of selection practices were organized and categorized in such a way that these methods and procedures were clearly understood. Where analyses of data were needed to estimate the efficiency of selection practices, percentages and averages were used, together with discussion and description of findings.

By means of interviews with the principals or assistant principals of the composite high schools, it was found

that almost all the same methods and procedures of selection were generally practiced in all composite high schools in the city of Edmonton.

Steps in registration and selection of students in the senior high schools were basically as follows: provisions for helping the junior high school students entering grade X before registration in the senior high schools; preliminary registration; actual registration; and provision for change of program of students. Basically, the criteria used by the senior high schools, in selection of students for programs, were grade IX marks which matched the program requirements set by the individual schools.

In estimating the efficiency of selection practices, program enrollment, change of program, school attendance, and achievement were used as criteria. Examination of pupil records in the sample composite high school revealed a low percentage of change of program, high average attendance, and a high percentage of students who were classified as most likely to complete high school within three years. It was therefore concluded that the efficiency of selection practices in Edmonton composite high schools was high.

An interesting secondary finding was the very high correlation (far beyond the .001 level of statistical significance) between marks obtained by students on the Easter pre-Departmental examinations and those obtained on the Grade XII external examinations set and marked by the provincial Department of Education.

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CHAPTER I

THE PROBLEM AND DEFINITIONS OF TERMS USED

I. INTRODUCTION

Secondary education is more and more important in every part of the world since the demands for manpower and human resources are increasing, and development and progress are occurring in both scientific and cultural areas. At first, only elementary education was necessary, for only the fundamental demands for reading, writing, and arithmetic were needed. Education beyond elementary level was for an elite or for the training of a ruling group. But as society is so rapidly changing, becoming more dynamic and more complex, secondary education becomes essential for each individual for competence as a future citizen.

The ideals of universal secondary education and scholastic excellence are important in both traditional and modern practice in secondary education. These ideals are implied in the present purposes of secondary education and educational values which have emerged and are accepted by society.¹ Accomplishment of these ideals has been attempted by almost all educational systems. One, obviously, is the reorganization of secondary schools to be the comprehensive or

¹Rudyard K. Bent and Hary H. Kronenberg, Principles of Secondary Education (New York: McGraw-Hill Book Company, 1966), p. 70.

composite type.

To discern the nature and problems pertaining to it, the definition and concept of the comprehensive or composite secondary school need to be considered. According to the concept of the composite high school in Canada, it would appear that a secondary school offering more than one program of study can be termed a "composite high school".

The comprehensive high school in an American context, as Conant states,

. . . offers, under one roof (or series of roofs), secondary education for almost all the high school age children of one town or neighborhood. It is responsible for educating the boy who will be an atomic scientist and the girl who will marry at eighteen. . . . It is responsible for educating the brightest and the not so bright children with different vocational and professional ambitions and with various motivation.²

The purpose of a comprehensive high school, in other words, is to provide for all children in a locality a secondary education suited to their needs, interests, and aptitudes with respect to the needs and interests of society as a whole. To a greater extent, the provision may make it possible for a developing society to meet the demands for manpower and human resources.

II. NEED FOR STUDY

Some major problems in the operation of the comprehensive high school have been faced by the school administration

²James B. Conant, The Comprehensive High School: A Second Report to the Interested Citizens (New York: McGraw-Hill Book Company, 1967), p. 3.

as the enrollment becomes larger and more programs are offered. One of the problems in the internal organization of a comprehensive high school is the selection of student programs. Regarding the variety of programs, the first difficulty arises in determining what courses are "right" for a particular student.³ The problems of pupil personnel management regarding selection grow even more perplexing when consideration is given to the attitudes of parents and students towards high school programs and the prestige attached to them.

It is assumed, concerning the student choice of program, that the students know what programs they are choosing with reference to their goals, needs, interests, and aptitudes. At the same time the guidance and counselling services in each school have attempted to assist the students to understand these aspects.

Since the student choice of program is subject to the approval of the principal,⁴ with some guidelines suggested by the school board, the actual practice in selection of student programs may be varied. In this sense, the question has been raised, with respect to the ideals and purposes of the comprehensive high school, whether or not the students' needs

³Alan F. Brown, Composite High Schools in Canada (University of Alberta Monographs in Education No. 1, Edmonton: Faculty of Education, University of Alberta, 1959), p. 90.

⁴Senior High School Handbook 1967-68 (Edmonton: Department of Education, Province of Alberta, 1967), p. 36.

and interests are being considered in the choice of programs as far as requirements for particular programs are concerned.

III. STATEMENT OF THE PROBLEM

The purpose of this study is:

1. to investigate the selection procedures that have been practiced in Edmonton composite high schools, and
2. to investigate the efficiency of these selection procedures.

Research Questions. Consideration of the procedures in the selection of students in the comprehensive high schools reveal a number of related problems for investigation. These problems, stated as research questions, are:

1. What provisions are made in helping students in the Junior high school in program selection before entering the Senior high school?
2. What are the major criteria used in selecting students for programs?
3. What conditions govern the use of the pre-departmental or departmental examination results for the students' choice of program?
4. How can the school take into account the needs, interests, and aims of the students in addition to their academic abilities as shown by examination results?
5. What provisions exist for the students in academic and non-academic programs to change their programs?
6. Who has authority to determine the choice of program and change of program of individual students?
7. What percentage of the student sample take the academic and non-academic programs?

8. What percentage of students change their programs after permanent programs have been set up and chosen?
9. What difference exist between the academic and non-academic students in school attendance?
10. What percentage of students in the academic program are most likely to complete their high school education?
11. What percentage of students in the non-academic programs are most likely to complete their high school education?

IV. SIGNIFICANCE OF THE STUDY

Selection of student programs is one of the most important functions in the comprehensive high school in which a variety of programs is offered. Matching of courses with students' needs, interests, and aptitudes is considered important. It will improve educational opportunities and likelihood of achievement of students and reduce administrative difficulties of the school. Efficient methods and procedures of selection will help a student to avoid conflicts in his study, minimize the percentage of failure and drop-outs, and maximize the percentage of high school success. It will help the administrators since organization for instruction is one of the administrative tasks.

V. DEFINITION OF TERMS

Selection Procedure. In this study, selection procedures are taken to mean the methods and steps by which students with junior high school diplomas who have completed

preliminary registration in the senior high schools are selected in order to take academic or non-academic programs.

Academic Program. An academic program, in this study, means a program provided to meet the matriculation requirement for students seeking admission to university or college after high school education.

Non-academic Program. A non-academic program means a program, other than an academic one, provided for students seeking the high school diploma.

Change of Program. Change of program is interpreted as change of student course of study after registration in a particular program.

Pre-departmental Examination. The term pre-departmental examination, in this study, means an examination, made and marked by an individual school, administered to the students during the school year prior to the departmental examinations.

Efficiency of Selection. The efficiency of selection in this study is interpreted in terms of students' behavior after selection. High efficiency will be deemed present when records show a low percentage of change of program, high average school attendance, low percentage of drop-outs, and high percentage of high school success.

VI. DELIMITATIONS

1. The first part of this study was limited to the ten composite high schools in the city of Edmonton: Bonnie Doon, Strathcona, Queen Elizabeth, Harry Ainlay, Eastglen, McNally, Ross Sheppard, St. Joseph's, Victoria, and Jasper Place.

2. The second part of the study was limited to Victoria Composite High School which has a large enrollment and a very wide range of programs.

3. The student sample for the second part of the study were those who enrolled in grade X in the school year 1965-1966 and were normally expected to complete high school at the end of school year 1967-1968. The reason for selection of this group of students was to make this study focus on the comprehensive program which has been in full operation in this school since 1965-1966 as a result of the integration of the former Victoria Composite High School and Victoria Vocational High School.

VII. LIMITATIONS

1. The actual practice in each school or a group of schools in section of students may be slightly different according to the principal's discretion even though they follow the Department of Education's regulations as a general framework. Methods and procedures of selection in one school or a group of schools may not represent the others.

Therefore, the data collected and analyzed from one composite high school, according to the selection procedures used, nature of programs offered, and the number of students, should be interpreted with caution when making inferences concerning the total composite high school population.

2. The criteria used in estimating achievement of students were based on the Easter examination results instead of the Departmental examination results because the writer could not remain in Canada until the 1968 Departmental examination results became available. The reliability of the Easter marks as a predictor of successful completion of courses was based upon a sub-study of correlations between the Easter and the Departmental examination marks in a preceding year.

CHAPTER II

REVIEW OF RELATED LITERATURE

I. SELECTION FOR SECONDARY EDUCATION

The ideal of universal education has been taken as an important consideration in the development of modern practices in secondary education. As economic development is rapidly proceeding in every area, demands for manpower and human resources are increasing in all countries. In accordance with these aspects, "the concept of equality of opportunity for education plus the requirements for more highly trained personnel for business and industry added to the demands that public high schools should be open for all."¹

The transition from the primary to the secondary school is one of the major aspects in education, insofar as elementary and secondary education are separately provided. Selection of students from the elementary school to the high school has been practiced in every system of education at that level. Such practice in selection and allocation of children in secondary school may not be viewed as practice that conflicts with the ideal of education for all. At this point, Dempster points out:

Selection was not now to serve as a wicket gate on a bridge from one system to another that would allow able

¹ Lindley J. Stiles, et al., Secondary Education in the United States (New York: Harcourt, Brace & World, Inc., 1962), p. 47.

but poor children to pass to a specific form of education they could not otherwise afford, but to guide all children into those forms of secondary education for which they seemed most suited.²

The nature of secondary education and the educational system in any given setting have much effect in the selection at the secondary level. Selection concerns psychological, sociological, economic, and administrative aspects when individuals, society as a whole, and school administration itself are taken into account. "The real difficulties have been caused in recent years by the increasing number of pupils who have sought to continue their education and have put pressure upon the entrance procedures of the selective schools."³ In the country where the prestige of the grammar-school type of secondary education is not so entrenched and alternative forms of free secondary education are well established and in good repute,⁴ selection may not be a serious problem for the school system or for the community. But in countries where a traditional system of education, prestige of a certain type of secondary school, and a limited number of schools and programs offered exist, selection comes to be of major concern.

Methods and procedures of selection for secondary education may be different from system to system. A survey

²J. J. B. Dempster, Selection for Secondary Education (London: Methuen & Co. Ltd., 1954), p. 5.

³UNESCO, World Trends in Secondary Education (Zurich: UNESCO, 1962), p. 112.

⁴P. E. Vernon, Secondary School Selection (London: Methuen & Co. Ltd., 1957), p. 7.

by UNESCO pointed out, concerning selection for secondary education, that:

The countries of the world may be grouped roughly into three categories according as (a) they restrict entrance to selective secondary schools by the use of tests and examinations that are essentially competitive in character; (b) they admit children on the basis of an examination designed simply to see whether they have mastered the primary school course; (c) they admit all who, in the opinion of their teachers, have satisfactorily completed the primary school course.⁵

Selection practice in England, as an example of a system other than those in North America, requires that children reaching the age of 11 be selected by taking standardized objective tests of intelligence, English and Mathematics. But, as Beasley states:

The Junior Leaving Examination, more commonly known as the eleven plus examination, is one of the best known and most controversial aspects of English education. Its use as a prime determinant of what type of secondary school a child will attend aroused vigorous debates at home . . .⁶

In the United States, where state laws concerning education may differ in some respects, selection practices or the bases for entrance to high schools are varied and conflicting even though admissions are based upon both subject matter achievement and social and chronological age.⁷

⁵ UNESCO, loc. cit.

⁶ Kenneth L. Beasley, "London Eliminates 11+: The Transfer Document becomes the basis for Secondary School Selection," Comparative Education Review, 10:80, February, 1966.

⁷ W. French, J. D. Hull, and B. L. Dodds, American High School Administration: Policy and Practice (New York: Rinehart & Company, 1959), p. 347

However, in the great majority of school systems, students automatically pass into the high school upon the satisfactory completion of their elementary work . . . A practice growing more and more common is for the high school to accept any pupil whose elementary principal recommends him because it appears that the pupil's best interests will be served by the change in school environment, even though he has achieved much less than his age-mates have.⁸

A recent movement for the reorganization of secondary schools in England into the comprehensive type, has brought about an appropriate provision in that setting. In addition to the use of the Junior Leaving Examination, ". . . some districts prepare for the beginning of the school year of a comprehensive high school by giving tests in the primary school. A few schools go even further and interview all parents . . ."⁹ In London the Inner London Educational Authority has eliminated the eleven plus examination and has instituted a new selection procedure centered around the Transfer Document.¹⁰ The Department of Education's circular 10/65 (July, 1965) has proposed six main forms of organization of the comprehensive secondary school.¹¹ This organization provides adequately for the selection of students in

⁸Ibid.

⁹The Incorporated Association of Assistant Masters in Secondary Schools, Teaching in Comprehensive Schools (London: Cambridge University Press, 1960), pp. 14-15.

¹⁰Beasley, op. cit., p. 81.

¹¹Ann Glenerster, "Comprehensive Schemes Analysed," Where, 29:25-27, January, 1967.

the comprehensive secondary school in England.

Brown, in his study of the selection of students for vocational-technical high school programs in Alberta, reported that:

In general the selection procedures reported by the responding schools centered on standardized tests and measures, application-information forms, and interviews.¹²

Authorization of the selection or choice of program of students is made by counsellors, assistant principals in charge of student personnel, or other staff members designated for this purpose in 77 out of 101 schools included in his study.

Golan,¹³ studying Alberta principals' selection practices in order to allow students to try the matriculation program, reported that the criteria used for selection were based on the Aggregate Achievement, Mathematics, Science, and Scholastic Ability Stanine scores. He also found that the principals' selection practices vary according to the minimum standards set and the scholastic ability of the students.

II. CRITERIA AND PREDICTION OF HIGH SCHOOL SUCCESS

Much study has been completed concerning previous

¹²Bill B. Brown, "How Adequate are Our Selection Techniques?," American Vocational Journal, 41:44-46, November, 1966.

¹³Henry Golan, "Opportunity to try the Matriculation Program in Alberta Schools" (Unpublished Master's Thesis, University of Alberta, Edmonton, 1967).

performance of students in certain levels as predictors of success in academic and vocational areas in subsequent levels. Various types of tests have been used as predictor variables. Test results and other evidence regarding students' interests, aptitudes, or attitudes have been used as measures or criteria in selection, admission, and other screening areas. Predictors, when purposefully used at a certain time and level, will be varied in terms of validity, reliability, and availability. Tolbert pointed out that:

The implicit, if not explicit, prediction is made that all will be helped and will later show improvement on a relevant criterion, e.g., suitability of occupational plans. Even if tests or inventories are given at the beginning, usually for research purposes, and even if some comparison with the criterion is made later, rarely if ever is a prediction made covering the range from failure to success. . . . Thus prediction of the sort made with tests in admission, selection or classification are usually not available.¹⁴

However, a great number of studies in this area have been proceeding and the results have been applied in some specific areas and situations.

Gushaty,¹⁵ studying the 3-Year Matriculation Program (M.P.3) entrance requirement in Calgary, found that the present criteria of 3 A's and 3 B's as minimal scores for entrance into the program is too broad and provides little or

¹⁴E. L. Tolbert, "Predictability in Testing and Counseling," Personnel and Guidance Journal, 45:220, November, 1966.

¹⁵M. Gushaty, "The Three-year Matriculation Program: A Study of the Present MP3 Entrance Requirement," Professional Development Bulletin, 6:2-8, May, 1967.

no reasonable chance of success to the students at the lower end of the scale when the stanine total is used. He further suggested that:

If letter grades are to be continued, . . . entrance to the M.P.3 be restricted to those students with a minimum of 5 A's and 1 B, leaving it to the principal's discretion to allow students with more than one B to enter the program providing the stanine total is 39 points or higher on the six grade IX final examinations.¹⁶

One of the studies made by Nearing¹⁷ includes performance of the less able students. The study, concerning the academic careers of the students who had an I.Q. of 100 or less, found that 73 per cent dropped out before finishing grade XII. Only 2.6 per cent successfully matriculated. They had poor attendance records. They earned better grades in non-academic than academic courses.

Black and Ulmer,¹⁸ studying the value of Grade IX departmental examinations in predicting success at the grade XII level, found a positive correlation between the grade IX subjects and the same subjects in grade XII. But, as the sample was rather small, they further suggested that:

The prediction of a grade XII score from the grade IX score is not much better than guess, using Hull's index

¹⁶Ibid., p. 7.

¹⁷John J. Nearing, "A Study of the Academic Careers of Selected Non-academically-gifted Students in Alberta Composite High Schools" (Unpublished Master's Thesis, University of Alberta, Edmonton, 1959).

¹⁸D. B. Black and H. Ulmer, "The Value of the Grade IX Departmental Examinations in Predicting Success at the Grade XII Level" (Unpublished Master's Thesis, University of Alberta, Edmonton, 1950).

of predictive efficiency as the measure. This was to be expected, because, as other investigators have shown, there is a multitude of factors affecting the scholarship of the students. Some of the factors are: the maturity of the student, physically, mentally, emotionally, and socially; the influence of his social contacts; and the student's own personality, aptitudes, capacity, and interests.¹⁹

In the study of the guidance value of grade IX departmental examinations and other selected factors in relation to matriculation of composite high school students in Alberta, McInnis²⁰ found that General Test scores, aggregate scores on the departmental examinations, relative class standing, and honor points provide useful information for counselling grade IX students entering the senior high school. He also found that relative class standing was the most efficient single predictor of matriculation success.

Campbell,²¹ in his study entitled "Grade IX Marks as Predictor criteria for Success in Vocational "12" Courses", reported that science and mathematics had highest correlations with the grade X vocational subjects while the Quantitative S.C.A.T. and social studies had less.

In 1967 Karpoff conducted a study of the relationship

¹⁹Ibid., p. 33.

²⁰Malcolm J. McInnis, "The Guidance Value of Grade IX Departmental Examinations and other Selected Factors in Relation to Matriculation of Composite High School Students" (Unpublished Master's Thesis, University of Alberta, Edmonton, 1958).

²¹Theodore R. Campbell, "Grade IX Marks as Predictor Criteria for Success in Selected Vocational Subjects" (Unpublished Master's Thesis, University of Alberta, Edmonton, 1966).

between some measures of student aptitudes and achievement in the vocational "22" courses.²² He found that the most useful predictors of the vocational "22" courses achievement were Science IX, Space Relations, Aggregate Stanine, Clerical Speed and Accuracy, and Literature IX. He suggested that present practice of using only academic course achievement as allocation criteria or basic guidance data for vocational programs should be revised.

Black,²³ in his study of the prediction of university freshman success by using grade IX departmental scores, mentioned the Department of Education statistics that of 60 per cent of students enrolled in the matriculation program, only 40 per cent remained in the same program at the end of three years. Of this latter group, only half achieved matriculation standing.

III. ACHIEVEMENT

Study of student achievement is related to the area of selection. The study of factors of school achievement, problems in relation to achievement, and other aspects regarding achievement of students in high school will develop supporting

²²John T. Karpoff, "Aptitudes for Achievement in the Vocational Programs of One Composite High School in Alberta" (Unpublished Master's Thesis, University of Alberta, Edmonton, 1967).

²³D. B. Black, "Prediction of University Freshman Success Using Grade IX Departmental Scores," Alberta Journal of Educational Research, 5:229-239, December, 1959.

criteria in determining the student choice of program.

In the study of the differences between mental ability and academic achievement of the college-bound and non-college-bound students in nine comprehensive high schools in Portland, Gadzella²⁴ reported some major findings. By using six characteristics ranging from I.Q. tests to the Iowa Test of Educational Development, in finding academic achievement of students, he concluded that there were significant differences between the means of achievement scores of the two groups of students for all characteristics except the grade point average.

Miner,²⁵ in studying the structure of achievement measures used in a public school system in assessment of achievement of high school students' academic careers, found that the high school achievement cluster showed some relationship to the objective achievement cluster. For this purpose, a three-factor structure to determine achievement, namely Objective Achievement defined by all intelligence measures, Early Citizenship Measures, and high school achievement defined by ninth and twelfth grade marks were used. She concluded in part that teacher's evaluations in the early

²⁴B. D. Gadzella, "Differences in Mental Ability and Academic Achievement of Two Groups of High School Students," Journal of Educational Research, 60:104-6, November, 1966.

²⁵Betty C. Miner, "Three Factors of School Achievement," Journal of Educational Research, 60:370-76, April, 1967.

grades tended to be assessment of behavior rather than academic performance.

Marshall,²⁶ in studying the problems of three groups of high school students in relation to grade achievement, found some major problems among the achievement groups. When placed in three different achievement groups determined by the size and direction of the discrepancy between a student's expected and actual grade point averages, some problems among each group of students were revealed. Feelings of financial deprivation, problems of mixing with the opposite sex, and problems of adjusting to the school situation were found among the low-achievers while high-achievers expressed concern about personality problems. The average achievers expressed unhappiness at home from restrictions made by their parents. He also suggested that high-achievers were more aware of their internal needs, while low-achievers were more aware of their external needs.

More studies have been done to identify characteristics of achievers and underachievers in the high school. Carmical²⁷ found that achievers were superior in aptitude of verbal and numerical reasoning, while underachievers were superior in spatial and mechanical aptitudes. For vocational

²⁶John C. Marshall, "Problems of High School Students in Relation to Grade Achievement," School and Society, 95:237, April, 1967.

²⁷Laverne Carmical, "Characteristics of Achievers and Underachievers of a Large Senior High School," Personnel and Guidance Journal, 43:390-5, December, 1964.

preference, he found that achievers were interested in occupations of computational and scientific content, while the underachievers seemed to prefer the mechanical or persuasive field.

In 1962, Black²⁸ reported the findings of the three year study of the academic careers of the superior high school students from grade X to grade XII. The group of students was selected at the end of grade IX by means of ability tests and grade nine standing. He found that, of 833 pupils included, one in ten did not enter grade X in the following year, one in eighty left school at the end of grade X while one in sixteen left school at the end of grade XI, and six in ten of those who remained achieved matriculation standing at the end of three years.

IV. CHOICE OF PROGRAM

When choice of program is left to the student's preference regarding his needs, interests, and aptitudes, some students may have conflicts in choosing a particular program. Among the factors which help to determine the best educational and vocational pattern for a given person are his mental ability, home background, personality traits, and

²⁸Donald B. Black, "A Three-year Academic History of Eight Hundred and Thirty Three Superior Alberta Grade IX Students," Alberta Journal of Educational Research, 7:50-61, March, 1961.

previous experiences.²⁹ One of the difficulties in guidance service is to know at what age level most people decisively think about their career goals and what factors influence their choice of program in the high school. The amount and kinds of assistance needed by junior high school students to make adequate educational choices for high school has been a major problem in the guidance program. If there is a specific age level or period during the high school years when students are likely to make a firm decision regarding educational program or vocational choice, this knowledge will be most helpful in guiding them.

Coplan, Ruble, and Segel³⁰ suggested two possible areas of concern in helping students in the junior high school regarding maturity in educational and vocational choices. One area of concern, they maintained, " . . . lies in the guidance procedures which must be utilized to assist the students toward choice of curriculum which would be reasonably consonant with their aptitudes, abilities, and vocational choice."³¹

Studies concerning the stage of the student's decision-making for the educational and vocational choices

²⁹Ruth Strong, The Adolescent Views Himself: A Psychology of Adolescence (New York: McGraw-Hill Book Company, 1957), p. 400.

³⁰Stanley W. Coplan, et al., "A Theory of Educational and Vocational Choice in Junior High School," Personnel and Guidance Journal, 42:129-35, October, 1963.

³¹Ibid., p. 134.

have been done by a number of investigators. Super, collecting from the previous studies in testing the assumption that early adolescence is often regarded as the period when it is appropriate to expect the making of the first career choice, concluded that ninth graders are clearly in an exploratory stage, not in a decision-making stage, of vocational development. He further pointed out that:

Ninth graders are looking into things, to try themselves out, but have not developed a point at which it is reasonable or desirable to expect them to commit themselves to a vocation.³²

In order to explore Super's belief that the ninth graders were in the vocational exploratory stage, Thompson³³ conducted a follow-up study of 2,287 ninth grade students in ten California high schools in 1962 and 1,790 sophomores of the original sample in 1963. He reported that freshmen were very definite in what was important to them in a vocation, and in their sophomore year over three-fourths of these still rated the importance of the vocational values just as they had a year previously. In other words, from the conclusions of this study, ninth graders were somewhat in a decision-making stage.

In 1964, Robinson completed a study entitled

³²Donald E. Super, "The Critical Ninth Grade: Vocational Choice or Vocational Exploration," Personnel and Guidance Journal, 39:108, October, 1960.

³³O. E. Thompson, "Occupational Values of High School Students," Personnel and Guidance Journal, 44:850-853, April, 1966.

"Consistency of Vocational Selection and Relationship between Situational and Attitudinal Variables of Saskatoon Collegiate Male Students". He concluded that inconsistency in making occupational choices increased during the first three years of high school, and at the grade XII level a higher percentage of students were consistent than at the grade nine level.³⁴

Inconsistency in making educational and vocational choices by students in the junior high school, according to the studies, seems to exist. But, as students enter the senior high school, this inconsistency may be reduced as a result of provisions made by the junior and senior high schools. One such provision is the guidance service program provided before registration and while they are in the senior high school.

Influence on educational program or career choice of students is one of the areas upon which the studies have focused. In relation to readiness in making decision for vocational choice at the stage of early adolescence, factors that influence the student's interests and attitudes are important concerns. Influence of parents, peer group, and teachers, as well as attitudes of students and parents toward the high school programs, are said to be significant for

³⁴Paul Robinson, "Consistency of Vocational Selection and Relationship between Situational and Attitudinal Variables of Saskatoon Collegiate Male Students" (Unpublished Master's Thesis, University of Alberta, Edmonton, 1964).

student choices of programs and achievement.

In 1966, Cobb and Cordozier³⁵ conducted a study of factors influencing curriculum choice of students in the high schools in Maryland, U.S.A. They reported that students had greatest influence on their own choice of programs, while mother, teachers, and father ranked lower in influence respectively.

Weinberg and Skager, in their study of the correlation between social status and some areas of guidance involvement of the high school students, reported that:

The social status variables, parental and projected social status, correlate positively with knowledgeability about chosen occupation, i.e., the higher the social status of the parent or occupation, the more the student knows about his chosen occupation.³⁶

In 1959, Kelland³⁷ conducted a study of the prestige of the educational program in Alberta composite high schools. He reported, from prestige rankings given by parents, teachers, and students, that the matriculation program had highest prestige, for both boys and girls, when compared with the other programs of study.

³⁵Robert A. Cobb and V. R. Cordozier, "What Factors Influence Curriculum Choice?," American Vocational Journal, 41:30-32, October, 1966.

³⁶Carl Weinberg and R. Skager, "Social Status and Guidance Involvement," Personnel and Guidance Journal, 44:586-90, February, 1966.

³⁷Newman Kelland, "A Study of the Prestige of Certain Aspects of Educational Program in Alberta Composite High Schools" (Unpublished Master's Thesis, University of Alberta, Edmonton, 1959).

The prestige of each high school program might affect the program choice and enrollment in particular courses or programs. This aspect was revealed in the study made by Carran in 1961. In the study of student and adult attitudes towards the technical electives program in Edmonton composite high schools, he reported that the group most opposed to discontinuing shop programs were boys in the high schools included in the study. The group showing least favor towards the technical electives were those having least experience or contact with the program. These included fathers in professional occupations, teachers of academic subjects, and boys who did not choose shop subjects. Enrollment in the technical electives was relatively low in second and third year. For this point he also mentioned that:

Other results, however, pointed to certain factors that would adversely influence enrollment in technical electives. Parents do urge their sons to follow matriculation pattern regardless of student interests or aptitudes.³⁸

V. SUMMARY

Selection for secondary education has been practiced in all countries and all school systems. Methods and procedures of selection vary from one to another, according to policy and administrative structure of the systems,

³⁸Raymond C. Carran, "A Study of Student and Adult Attitudes towards the Technical Electives Program in Edmonton Composite High Schools" (Unpublished Master's Thesis, University of Alberta, Edmonton, 1961), pp. 78-79.

traditional practices, nature of primary and secondary education, and nature of societies.

As selection for secondary school includes a number of factors and considerations for practice with respect to the achievement of the most efficient results, the literature presented here was not intended to favor the selection practice of any school or school system. The purpose was to show that there were a number of previous practices and studies related to the area of selection which merit consideration. Examination of selection practices in various school systems, regarding possibilities and effectiveness, would be considered by the high schools in order to improve their own practices. Studies concerning prediction of high school success, factors of high school achievement, and educational and occupational choices of high school students were areas with which selection of students should be concerned and some consideration could be given to the findings of such studies.

CHAPTER III

METHODOLOGY OF THE STUDY

I. THE SUBJECTS AND SELECTION OF THE SUBJECTS

The study consisted of two parts. Part I dealt with the investigation of methods and procedures of selection practices in all composite high schools in Edmonton. Information needed was collected by means of interviews in ten composite high schools: Bonnie Doon, Strathcona, Queen Elizabeth, Harry Ainlay, Eastglen, McNally, Ross Sheppard, St. Joseph's, Victoria, and Jasper Place.

Part II, an estimate of the efficiency of the selection practices, included only Victoria Composite High School which has a large enrollment and provided a wide range of programs. As representative of all high school populations in Edmonton, the students enrolled in grade X in the school year 1965-1966, who were expected to complete high school by the end of the school year 1967-1968, were the sample for this part of study.

II. THE INSTRUMENT

To obtain information on selection methods and procedures for Part I, a structured interview schedule¹ was developed and used in interviewing the principals or assistant principals of the composite high schools included.

¹See Appendix A.

III. COLLECTION OF INFORMATION AND DATA

Information Concerning Selection Practices.

All composite high schools in Edmonton were contacted by the investigator in obtaining the information on selection practices and procedures. The principals or assistant principals of the schools were interviewed. The questions asked dealt with the following:

1. The school enrollment and the number of staff members.
2. The programs offered in the school.
3. The provisions made for preliminary registration of students in the junior high schools.
4. The criteria used for the students' choice of program.
5. Some provisions made for the students' choice of program.
6. The extent to which change of program of students was allowed.
7. Authorization of the students' choice and change of program.
8. Some problems and opinions concerning selection of students and other aspects of school operation.

Some relevant information, which was approved by the principals or assistant principals, was obtained from the schools' handbooks and other reliable materials.

Student Data.

The students of Victoria Composite High School who enrolled in grade X in the school year 1965-1966 were traced up to grade XII in the school year 1967-1968. The students

in this group were expected to complete high school education in this school year.

All data needed were collected from personal examination of the students' permanent cards,¹ cumulative record cards, and other files appropriately arranged in the data processing division of the school. The following data for each student were recorded:

1. Programs in grade X, XI, and XII.
2. School attendance.
3. Program changes in grade XI and grade XII.
4. Marks received in the 1968 Easter examinations.

IV. TREATMENT OF THE DATA

It was intended in this study that, in addition to the study of problems arising from the provision and operation of the comprehensive high school, some applications might be useful for any school system setting up a secondary school of this type. If applied to a non-Canadian country, however, the differences in social setting, culture, or educational system from the Canadian scene imply caution in using Canadian practice. Thus, all information for Part I concerning actual practices and procedures in selection of students was carefully organized and reviewed so that all existing aspects might be clearly revealed.

¹See Appendix B.

In Part II, where efficiency of selection practices might be estimated, all data collected from the school concerning the selected group of students were treated and analyzed by means of percentages, means, and observations. Discussions and observations from the analysis of the data were categorized into the following:

1. The school program;
 - a) Percentage of enrollment in each program,
 - b) The extent of the requirements for the programs.
2. Change of program;
 - a) Change of program at grade XI,
 - b) Change of program at grade XII.
3. School attendance;
 - a) Average attendance of students in academic program,
 - b) Average attendance of students in non-academic program,
 - c) Average attendance of students classified as those who were most likely to obtain the high school diploma,
 - d) Average attendance of students classified as unlikely to obtain the high school diploma.
4. High school achievement;
 - a) Percentage of students classified as most likely to obtain the high school diploma,
 - b) Percentage of students classified as unlikely to obtain the high school diploma.

Judgment of high school achievement of students was based on marks of the 1968 Easter examinations. Criteria used for determining achievement were those prescribed by the Department of Education:

1. Requirements for Diploma

- a) English: at least 15 credits (including 5 in English 10 and 5 in English 30 or 33).
- b) Social Studies: at least 10 credits (including 5 in Social Studies 10).
- c) Physical Education 10: at least 2 credits.
- d) Other credits to make a total of 100 credits including:
 - i) credit in at least one mathematics course.
 - ii) credit in at least one science course.
 - iii) credit in two grade XII subjects in addition to English 30 or 33.²

Students with an average of 40 per cent or better in each subject and sufficient prerequisites and credits as required by the provincial Department of Education were considered as most likely to obtain high school diplomas.

V. THE SUB-STUDY

A limitation upon this study was the fact that the criteria used in determining high school achievement of the selected group of students were the results of the 1968 Easter examinations and other additional requirements prescribed by the Department of Education, rather than the marks earned upon the external Departmental examinations. It was assumed by the investigator that Easter marks were likely to be significant predictors of the final marks on the external examinations set by the provincial Department of Education, although the investigator was not able to obtain any study

²Senior High School Handbook 1967-68 (Edmonton: Department of Education, Province of Alberta, 1967), p. 25.

result which would prove the evidence to support the assumption. The purpose of this sub-study, therefore, was to investigate the significant correlations existing between the Easter marks and the final marks of the departmental examination subjects.

Grade XII students in Victoria Composite High School who wrote the Easter and the departmental examinations in the school year 1966-1967 were selected to be the subjects.

It was hypothesized that statistically significant correlations would be found between the Easter and the final marks on the departmental examination subjects of grade XII students.

Findings of this sub-study revealed that highly statistically significant correlations do, in fact, exist between the Easter and final marks on grade XII departmental examination subjects².

Thus, upon this basis, judgment of high school achievement was made by using Easter marks as the criteria in Part II of this study.

²See Appendix C.

CHAPTER IV

REGISTRATION AND SELECTION PRACTICE IN EDMONTON

COMPOSITE HIGH SCHOOLS

Methods and procedures in registration for senior high schools in Edmonton have been practiced by the high schools in such a way that appropriateness of the high school programs of students and convenience for school administration were considered. Two-part registrations have been practiced in almost all schools: (1) Preliminary registration, where tentative programs of students were made before the departmental examinations by the grade IX students in the junior high schools entering grade X in the following year; and (2) the actual registration, where tentative programs stated by students in the preliminary registration forms were re-examined by the high school authorities, permanent programs set up, change of programs made, and students' timetables obtained.

I. PROVISIONS BEFORE REGISTRATION

Registration or selection for the comprehensive high school is an important step in the education of students when differences in their needs, interests, and aptitudes are considered since a variety of programs are offered in this type of school. The provision of appropriate guidance services and the offering of exploratory courses are ways by which

students are helped before entering the senior high schools. Problems concerning registration and selection of programs of study of students and dilemmas in school administration exist and have been faced by the senior high schools.

Some additional provisions have been made through cooperation between the junior and senior high schools for the purpose of helping students for registration and selection of high school programs. The following provisions have been generally made:

Meetings of the Administrators and Counsellors.

The purpose of this activity was to give the persons concerned an opportunity to meet and discuss relevant policies and practices which need cooperation between the schools. The administrators and counsellors of the senior high school had the opportunity to inform the junior high school administrators and counsellors about the school policy, school programs, facilities, needed enrollment for the school or for individual programs, requirements for courses or programs, procedures of registration and selection, and some related problems. The junior high school administrators and counsellors might get information in this way as to which guidance program was needed for the grade IX students entering the senior high school.

The meetings were held in both the senior and junior high schools. Some senior high schools invited the administrators and counsellors of the junior high schools to an

evening meeting at the high school, while representatives of some schools visited the individual junior high schools with the same purpose. The provision was made once a year by almost all senior high schools. Some schools provide such activity twice a year in which general matters are discussed at the first meeting and more specific matters are presented in the second.

Publications were distributed by the senior high schools in the meetings. All publications were those concerned with or related to high school education, school programs, and school registration. These publications included course description booklets, registration handbooks, and some related printed materials provided by particular schools.

Meeting with Students in the Junior High Schools.

The provision of a meeting in which the administrators or counsellors of the senior high school have the opportunity to meet the grade IX students before registration for the senior high school has been made in almost all schools. The purpose of the activity, as stated by the schools, was to have students become informed concerning the school programs, the nature of particular programs, opportunity of students to take any school programs, selection of programs, and procedures of registration. Provision was also made for students who had problems concerning registration and selection of high school programs to discuss these with high school

personnel.

Frequency of the activity in meeting with students in the junior high schools was reported generally as once a year. Some schools regarded this activity as the orientation for registration for the senior high school. One school reported that meeting with the grade IX students was not provided. It was left to the individual junior high schools to provide this program themselves when all information was given to the administrators and counsellors, except in the case of some students who had problems in their program selection and registration.

Meeting with Parents.

Some senior high schools provide for meeting with the parents of the grade IX students entering the senior high school in the following year. The meetings were held before the Easter examinations or before the time of preliminary registration. The purpose of the program was to inform the parents concerning the high school programs, opportunity for education in the senior high schools, selection and student choices of programs, and other related topics in which the parents should be informed. The provision, reported by the schools which provided this program, was important since the registration form or program choice of an individual student required approval of a parent.

The meetings were usually held at the junior high school where parents were invited to attend. In some schools

arrangements were made through the Home and School Association. Open house was one of such activities in which the senior high school buildings, shops, and all school facilities were opened for the school tour. In such special provisions all grade IX students of the junior high schools within the school's attendance area and parents were invited.

II. PRELIMINARY REGISTRATION

The worksheets for the registration, or the registration forms, were distributed to the grade IX students at a certain time after the Easter examinations. These forms were left with the students for a period of time for completion. Before completing the form, students were given instructions both by the junior and senior high school administrator or counsellor concerning the items to be filled out. A registration handbook, which consisted of procedures for registration and requirements for programs, distributed by the high schools, was used by students in selection of programs and filling out the registration forms. When problems arose, the students were helped by the junior high school counsellors or administrators, or contacted the senior high school individually.

When the worksheets of the registration forms were completed with the approval of the parents and junior high school administrator, they were sent back to the senior high school for approval, generally by the end of May. In some

schools the registration forms, after approval by the senior high school, were sent back to the junior high school students to copy information on the permanent registration forms or keysort cards.¹ These cards, filled out with pencil, were again sent back to the senior high school and were held there for the permanent programs which would be finalized on the basis of the departmental examination marks.

In one school, even though the students' programs were tentatively made on the basis of the Easter marks, all students' programs were set only on the basis of the departmental examination marks.

In the schools where the preliminary registrations were practiced, the master timetable for grade X was made on the basis of that registration, since total enrollment and registration in particular courses were somewhat fixed. But the timetables for individual students were not made until the permanent programs on the basis of the final marks had been set. One school reported that the timetable for grade X was made after all permanent programs of students in that grade were set, while timetables for other grades were made early before the beginning of the school term.

As the basis for the tentative programs stated by students on the preliminary registration forms, one school reported that such programs were based both on the pre-departmental examination marks and teachers' estimates.

¹See Appendix B.

III. STUDENTS' CHOICE OF PROGRAM

Choice of program of students in making the tentative programs in the preliminary registration was based on past achievement along with their needs and interests. Basically, past achievement, that is, the grade IX marks, were the major considerations from which the programs were tentatively made.

Requirements for particular programs in the senior high schools were slightly different insofar as the programs of individual students were subject to the discretion of the senior high school principals with some guidelines suggested by the Edmonton Public School Board. Typically, the requirements for particular programs offered in the schools were stated in the schools' registration handbooks distributed to students before filling out the registration forms. In selecting the programs, the students were asked to consider their grade IX marks according to the requirements stated in the Senior High School Handbooks or the particular school's handbook. The following Tables show the requirements for various programs, except for the General, Business Clerical, Home Economics, and Trade and Services programs which require a grade IX diploma, in the schools.

TABLE I
ADMISSION CRITERIA OF THE 3-YEAR SENIOR
MATRICULATION PROGRAM IN COMPOSITE
HIGH SCHOOLS IN EDMONTON

Requirement	School ^a									
	1	2	3	4	5	6	7	8	9	10
A grade IX diploma with										
a. 4 A's and 2 B's or better	x	x	x	x	x	x	x	x	x	x
b. No marks below B	-	-	x	x	-	x	x	x	x	-
c. A in mathematics and science	-	-	-	-	-	-	x	-	-	-
d. B in not more than two subjects	-	-	-	-	-	x	-	-	-	-

^aAll schools are identified by number. Names will be found in Appendix A.

TABLE II
ADMISSION CRITERIA FOR 4-YEAR SENIOR
MATRICULATION PROGRAM IN COMPOSITE
HIGH SCHOOLS IN EDMONTON

Requirement	School									
	1	2	3	4	5	6	7 ^a	8	9	10
A grade IX Diploma with										
a. 2 A's and 4 B's or better	x	x	-	x	x	x	-	-	-	x
b. A (65%) average	-	-	-	x	-	-	x	-	x	-
c. No marks below B	-	-	x	x	-	-	-	-	x	-
d. One of A's must be in Mathematics or Science	-	x	-	-	-	-	-	-	-	-
e. B (50%) average, no marks below C (40%)	-	-	-	-	-	-	-	x	-	-
f. At least half of grade IX subjects with A or better	-	-	-	-	-	-	x	-	-	-

^aThe school maintained, "It should be appreciated that a student with minimum qualifications of 2 A's and 4 B's for this program has little chance of achieving senior matriculation even in four years, unless he can improve his habits and attitudes."

TABLE III
ADMISSION CRITERIA FOR THE JUNIOR MATRICULATION
PROGRAM^a IN COMPOSITE HIGH SCHOOLS
IN EDMONTON

Requirement	School									
	1	2	3	4	5	6	7	8	9	10
A grade IX Diploma with										
a. B average (50%)	-	-	-	x	-	-	-	-	x	-
b. No marks below C (40%)	-	-	-	x	-	-	-	-	x	-
c. 4 B's and 2 C's	x	x	-	-	x	-	x	-	-	-
d. No C in Mathematics and Science	-	x	-	x	-	-	-	-	-	-

^aThe Junior Matriculation program is not offered in schools 3, 6, 8, and 10.

It is maintained by administrators of the schools that the Junior Matriculation program is the same as the 4-year Matriculation program since the students in this program can proceed to the Senior Matriculation program as the second year grade XII. School 6 set the requirements for the Junior Matriculation program as the same as those for the 4-year Senior Matriculation program.

TABLE IV

ADMISSION CRITERIA FOR THE BUSINESS EDUCATION PROGRAM
IN COMPOSITE HIGH SCHOOLS IN EDMONTON

Requirement	School									
	1	2	3	4	5	6	7	8	9	10
<u>(1) Business Bookkeeping</u>										
A grade IX Diploma with										
a. B average	-	-	x	x	-	-	x	x	x	x
b. B in Mathematics	-	x	x	-	-	x	x	x	x	-
c. 4 B's and 2 C's	x	x	-	-	x	x	-	-	-	-
d. No marks below C	-	-	-	x	-	-	-	-	x	-
<u>(2) Business Secretarial^a</u>										
A grade IX Diploma with										
a. B average	-	-	x	x	-	-	-	x	x	-
b. No marks below C	-	-	x	x	-	-	-	-	x	-
c. A in Language	-	-	x	x	-	-	-	x	-	-
d. 4 B's and 2 C's	x	-	-	-	x	x	x	-	-	x

^aBusiness Secretarial is not offered in school 2.

TABLE V

ADMISSION CRITERIA FOR THE TECHNICAL PROGRAM^a
IN COMPOSITE HIGH SCHOOLS IN EDMONTON

Requirement	School									
	1	2	3	4	5	6	7	8	9	10
A grade IX Diploma with										
a. B average	-	-	-	x	-	-	-	x	x	-
b. B in Mathematics and Science	-	-	-	x	-	x	-	x	x	-
c. 4 B's and 2 C's	x	-	-	-	-	x	-	-	-	x
d. No marks below C	-	-	-	x	-	-	-	x	x	-

^aTechnical program is not offered in school 2, 3, 5, and 7.

IV. ACTUAL REGISTRATION

The senior high schools normally announce late in August their registration date for the students from the junior high schools who wished to register at the senior high schools. This is the actual registration for students entering grade X. Before registration, as practiced by all schools, the students knew their grade X programs and courses which were tentatively made or changed according to their preferences or decisions of school authorities. Some schools made the permanent programs known to students before the day of actual registration. Communication was made by telephone or letters to the parents or to the students themselves. Some schools contacted students or parents immediately when the programs were approved or changed. In two schools, the permanent programs of individual students were not made known until the day of registration.

Date of actual registration was usually set before the opening of the school term, that is, the very beginning of September. Some schools with small enrollment set the date of registration on the first day of the school term.

The schools arranged for registration by providing registration teams. Each team was responsible for the registration of each program or course. When the students were registered in all courses stated in their registration forms, they were given the individual timetable with the homeroom number, and classroom number.

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V. CHANGE OF PROGRAM

Provisions for change of programs were found in every school included in this study. The schools allowed the students to change the programs according to their preferences as well as after advising them to change in some particular cases.

Insofar as the tentative program of an individual grade X student was set beforehand on the basis of the grade IX Easter marks, the choice of program made on that basis or at that time might need to be changed for many reasons. A student who had chosen a vocational or technical program in a particular area might change to another area in this program according to his needs, aspirations, or career plans which at the time of preliminary registration were not decisive ones. In such cases, the initiative for a change of program came from the student himself.

The initial student choice of program, as mentioned before, was largely based on past achievement, that is, the grade IX departmental examination marks. The students had to meet the requirements for a particular program according to grades in the grade IX subjects. If the Easter marks of the grade IX subjects were lower than those which appeared in the departmental examinations of the same subjects, a student could be required to change his grade X program to another more suited to his departmental examination standing. In this case, change of program of an individual student was

made by the school authority according to system-wide requirements and individual school practice.

The extent to which students were allowed to change their programs might be observed to include the following:

1. A student was allowed to change from one elective to another in any program but subject to some recommendations of the school.
2. A student in the Matriculation program was allowed to change to the Non-matriculation program when he met requirements which were lower than those for the program in which he was initially registered.
3. A student, other than those entering grade X, was allowed to move to the Matriculation program or higher required program when he did better in any one year than in the preceding year. For example, he would be allowed to move from the Junior Matriculation to the Senior Matriculation program.
4. In one school, the students were not allowed to move to the other programs from those which they had chosen but were counselled to drop some subjects if they did poorly in the Christmas examinations.

Change of program, as maintained by the administrators of the schools, affected the study of students in the new courses regarding the subject matter and time of change. If a student were allowed to change to a new subject or a new program several weeks after the school term started he would meet difficulties in keeping pace with other students who had been attending from the beginning and, inevitably, the teaching of a particular subject would be affected. With more or less restriction according to cases, every school has its own procedures and deadlines for the change of program of the students.

Most of the schools allowed students to change their programs after the beginning of the school term. The majority of schools permitted change of program up to the middle of September. In case of study difficulties for a slower class in one school, permission for the change of program was extended to the middle of October. Two schools reported that change of program was not permitted after the school term started.

Percentage of change of program of students in every school was found relatively the same. Of the high school studied in Part II, change of students' programs in all grades in the whole school ranged from 10 per cent to 20 per cent in all grades.

Authorization of change of program of students was basically left to the grade coordinators in almost all schools. Change of program of an individual student was made by using a registration change card which required approval by the grade coordinators or the assistant principals. In some cases, according to conflicts concerning the students' grade standing, needs, and past achievement which might be determined for the choice of program, recommendations of the counsellors were needed for confirmation.

VI. SUMMARY

Registration and selection procedures for the composite high schools are relatively the same, even though differences in some particular aspects exist according to the

discretion of the school authorities.

The provision of the preliminary registration is seemingly for the convenience of the school administration concerning the arrangement of the programs to be offered, making of the timetables, acquisitions of materials, and assignment of teaching staff. The time between the preliminary registration and the actual registration was adequate for students to consider their grade IX standings from the Easter examination results and select their programs. It was adequate for school authorities to tentatively determine the students' programs according to the regulations and requirements set down by the schools and/or the Department of Education.

The major criterion used for selection of students for programs was the students' past achievement. Specifically for students entering grade X, the past achievement evidence was the grade IX marks. Although other examination results were used as criteria for the choice of programs of students in the preliminary registration, these were only the predictors of the departmental examination results. The decisive criterion upon which the permanent programs of students were based were the departmental examination marks.

The extent to which the students' needs, interests, and aims were taken into account concerning choice of programs was made within the framework of the past achievement. It is obvious, especially in the Matriculation program, that, first, students met the requirements for the program by

considering their standings in the previous grade rather than by considering their needs and interests to try the program. Some concessions were made for the students to try any program which required higher marks than their standings were to the extent that those marks were close to the requirements. In those cases, the students were advised to change to the other programs possible according to their standings at the end of the school term or school year, provided they did better in the trial ones.

CHAPTER V

EFFICIENCY OF SELECTION PRACTICES IN EDMONTON COMPOSITE HIGH SCHOOLS

The purpose of this part of study was to estimate the efficiency of selection methods and procedures by using certain student data from one composite high school as representative of all composite high schools included in this report under Part I.

The sample consisted of 601 students in Victoria Composite High School who registered in grade X in the school year 1965-1966, the majority of whom were expected to get the high school diploma at the end of the school year 1967-1968. The three year follow-up was made by studying this group of students from grade X to grade XII.

Analysis of data and records of students, from which efficiency of selection practice of the school were determined, was made under these headings:

1. Percentage of students enrolled in the Matriculation and the Non-matriculation programs.
2. Percentage of students changing programs.
3. School attendance records of students in the Matriculation and the Non-matriculation programs.
4. Percentage of students in the Matriculation and the Non-matriculation programs who were most likely to complete high school education at the end of the school year 1967-1968.

5. Percentage of students in the Matriculation and the Non-matriculation programs who were not likely to complete high school education at the end of the school year 1967-1968.
6. School attendance records of students who were most likely to complete and who were not likely to complete high school at the end of the school year 1967-1968.

The following limitations are noted here: (1) All names of students originally registered in grade X at the beginning of the school year 1965-1966 were taken as the basic sample; (2) each student's records and data were collected and analyzed by means of percentage and means; (3) the students whose names were missing in grade X, XI, and XII were left without any follow-up whether they were withdrawers, transfers, or drop-outs; (4) the remaining names, for which records and data were not available, were not included.

The original enrollment in grade X in the school year 1965-1966 was 601, but full data and records were not available on 129 of the 601. This left a sample of 472 for grade X in the school year 1965-1966. Data on 471 students were studied in grade XI. In grade XII, data and records of 29 students in the grade XI sample were not available, and the actual number of students proceeding from grade XI was therefore 442. 271 previously unknown students who registered in grade XI, and 98 similar cases in grade XII, were not included in this study. The number and percentage of the student sample are shown in Table VI.

TABLE VI

DISTRIBUTION OF THE STUDENT SAMPLE FROM GRADE X
TO GRADE XII, VICTORIA COMPOSITE
HIGH SCHOOL, EDMONTON

Characteristics	Number of Students	Per Cent
Total original enrollment in Grade X as of September, 1965	601	100
Number for which sufficient data not available	129	21.46
Remainder of Grade X sample amenable to analysis as of September, 1965	472	78.53
Grade XI sample as of September, 1966	471 ^a	78.37
Number for which sufficient data not available	29	4.82
Grade XII sample as of September, 1967	442	73.54

^aPart of the decrease between Grade X and XI samples is contained in the 129 cases for which full data was not available.

I. PROGRAM ENROLLMENT

In considering the percentage of program enrollment for the purpose of this study, the school programs were categorized into two main groups--Matriculation and Non-matriculation. The Matriculation group, where provision is made for students seeking high school diplomas and qualification for university and higher educational institution entrance, is further divided into two sub-groups--the 3-year Senior Matriculation and the so-called Junior Matriculation groups.

The 3-year Senior Matriculation program is recognized as the program offered for students with high ability who aim to complete high school education within 3 years and enter university. The Junior Matriculation program, according to the school's requirements, is offered for students seeking entrance to university or higher educational institutions, but not within 3 years. The Junior Matriculation includes also the 4-year Senior Matriculation programs.

The Non-matriculation program is recognized as the program with the basic aims of preparing or training students for employment or for occupations, for further vocational training, and for general secondary education. These programs include Business, Home Economics, Technical, and General programs.

Number and percentage of program enrollment in grade X, XI, and XII are shown in Table VII, VIII, and IX.

TABLE VII

DISTRIBUTION OF STUDENT SAMPLE BY PROGRAM ENROLLMENT
IN GRADE X, VICTORIA COMPOSITE HIGH SCHOOL
EDMONTON, 1965-1966

Program	Number of Students	Per Cent
<u>Matriculation</u>		
a. Senior Matriculation	130	27.54
b. Junior Matriculation	97	20.55
<u>Non-matriculation</u>		
a. Business Education	58	12.29
b. Technical	134	28.39
c. General	53	11.23
TOTAL	472 ^a	100

^aTotal number of student sample in grade X from which data and records were available.

TABLE VIII

DISTRIBUTION OF STUDENT SAMPLE BY PROGRAM ENROLLMENT
IN GRADE XI, VICTORIA COMPOSITE HIGH SCHOOL
EDMONTON, 1966-1967

Program	Number of Students	Per Cent
<u>Matriculation</u>		
a. Senior Matriculation	116	24.62
b. Junior Matriculation	92	19.53
<u>Non-matriculation</u>		
a. Business Education	63	13.37
b. Technical	168	35.69
c. General	32	6.79
TOTAL	471 ^a	100

^aTotal number of student sample in grade XI from which data and records were available.

TABLE IX

DISTRIBUTION OF STUDENT SAMPLE BY PROGRAM ENROLLMENT
IN GRADE XII, VICTORIA COMPOSITE HIGH SCHOOL
EDMONTON, 1967-1968

Program	Number of Students	Per Cent
<u>Matriculation</u>		
a. Senior Matriculation	86	19.46
b. Junior Matriculation	102	23.08
<u>Non-matriculation</u>		
a. Business Education	60	13.57
b. Technical	167	37.78
c. General	27	6.11
TOTAL	442	100

Discussion Concerning Program Enrollment.

Grade X. Enrollment in both the Matriculation and the Non-matriculation program were relatively the same. It was 48.09 per cent in the Matriculation program and 51.91 per cent in the Non-matriculation program. The Senior Matriculation program had the largest enrollment among the Matriculation programs (27.54 per cent) and the Technical program had the largest enrollment among the Non-matriculation programs (28.39 per cent).

Within the matriculation programs, it is seen that the Senior Matriculation program is more popular than the Junior Matriculation program. An observation can also be made on the enrollment of the Technical program, which was greater than the other Non-matriculation programs, that the nature of the program concerning curriculum, content, adequacy of the shop programs, and the advantage which will be gained from the program are interesting and realized by both students and parents.

Grade XI. The Senior Matriculation program still had a large enrollment but the proportion of the total enrollment was 2.91 per cent less than that in grade X. It could be assumed that the students who did not remain in the program met some difficulties in their study or the courses were too hard for them to cope with. One observation can be made, concerning the lower percentage of students remaining in this program, that admission requirements for the program were too low

or the practice of the school authorities in allowing students to try the program was too permissive.

Percentage of students in the Technical program was relatively high--7.00 per cent greater than that in grade X. It may be assumed that the students in the Matriculation program changed to the Technical program when they did not meet the requirements in the Matriculation program. Another possibility is that the students in the General program changed to the Technical program when their standings rose or their interests changed.

Grade XII. The total enrollment in grade XII dropped 6.19 per cent from the enrollment in grade XI. The missing students may be the transfers or drop-outs. Percentage of students in each program except for those in the Junior Matriculation program dropped from the previous year.

It could be assumed that the students who did not improve in their studies or those who decided to take more than three years to get matriculation requirements, changed to the Junior Matriculation program. The students in the Non-matriculation programs also might have changed to the Junior Matriculation program when their standings were better at the end of grade XI.

II. CHANGE OF PROGRAM

Provisions for change of program, as noted in the previous chapter, were found in every composite high school,

with varying restrictions.

The school from which the sample was drawn for Part II of the study allowed students to change their programs basically during two periods of time. First, when students made a preliminary registration in grade X on the basis of the Easter marks and their programs were not approved when using the final marks as decisive criteria, they were requested to change program. Second, change of program was also allowed within the first two weeks after the beginning of the first school term if the students' needs and aims had changed since preliminary registration.

Since changes of program made after the preliminary registration and after the beginning of the first school term of grade X in 1965-1966 could not be obtained by means of existing records of that year, evidences of change of program in this study were taken from the differences between the permanent programs which students carried from grade X to grade XI and from grade XI to grade XII.

Number and percentage of change of program from grade X to grade XI is shown in Table X, XI, and XII. In the Senior Matriculation program, shown in Table X, 22 out of 127 or 17.32 per cent of students changed to other programs in grade XI while 105 or 82.68 per cent remained in the program. The majority of those who made program changes, changed to the Junior Matriculation program (9.45 per cent).

TABLE X

CHANGE OF PROGRAM OF STUDENTS IN SENIOR MATRICULATION
PROGRAM FROM GRADE X TO GRADE XI. VICTORIA
COMPOSITE HIGH SCHOOL, EDMONTON

Characteristics	Number of Students	Per Cent
Change to Junior Matriculation program	12	9.45
Change to Non-matriculation program	10	7.87
Remaining in Senior Matriculation program	105	82.68
TOTAL	127 ^a	100

^aRecords concerning program of three students, included in Table VII, in this program were not available.

Change of program in the Junior Matriculation program in grade X was found to be relatively large. Table XI shows that 33 out of 97 or 33.02 per cent changed to the other programs. Change of program from the Junior Matriculation to the Non-matriculation program was largest (28.87 per cent). Only 5.15 per cent changed to the Senior Matriculation program, while 65.98 per cent remained in the same program in grade XI.

TABLE XI

CHANGE OF PROGRAM OF STUDENTS IN JUNIOR MATRICULATION
PROGRAM FROM GRADE X TO GRADE XI. VICTORIA
COMPOSITE HIGH SCHOOL, EDMONTON

Characteristics	Number of Students	Per Cent
Change to Senior Matriculation program	5	5.15
Change to Non-matriculation program	28	28.87
Remaining in Junior Matriculation program	64	65.98
TOTAL	97	100

Change of program was found least in the Non-matriculation program. Only 19 out of 241 or 7.88 per cent changed to the other programs. 222 students or 92.12 per cent remained in the same program in grade XI. This is shown in Table XII.

TABLE XII

CHANGE OF PROGRAM OF STUDENTS IN NON-MATRICULATION
PROGRAM FROM GRADE X TO GRADE XI. VICTORIA
COMPOSITE HIGH SCHOOL, EDMONTON

Characteristics	Number of Students	Per Cent
Change to Senior Matriculation program	6	2.49
Change to Junior Matriculation program	13	5.39
Remaining in Non-matriculation program	222	92.12
TOTAL	241 ^a	100

^aRecords of four students, included in Table VII in this program were not available.

Percentage of change of program of students from grade XI to grade XII was found slightly different from that which appeared at the grade X-XI level. Table XIII shows that 25.86 per cent of the students in the Senior Matriculation program changed to the other programs. 24.14 per cent changed to the Junior Matriculation and only 1.72 per cent changed to the Non-matriculation programs.

TABLE XIII

CHANGE OF PROGRAM OF STUDENTS IN SENIOR MATRICULATION
PROGRAM FROM GRADE XI TO GRADE XII. VICTORIA
COMPOSITE HIGH SCHOOL, EDMONTON

Characteristics	Number of Students	Per Cent
Change to Junior Matriculation program	28	24.14
Change to Non-matriculation program	2	1.72
Remaining in Senior Matriculation program	86	74.14
TOTAL	116	100

Table XIV shows that no change of program was found in the Junior Matriculation to the Senior Matriculation program in grade XII. 22.89 per cent changed to the Non-matriculation program while 77.11 per cent remained in the same program in grade XII.

TABLE XIV

CHANGE OF PROGRAM OF STUDENTS IN JUNIOR MATRICULATION
PROGRAM FROM GRADE XI TO GRADE XII. VICTORIA
COMPOSITE HIGH SCHOOL, EDMONTON

Characteristics	Number of Students	Per Cent
Change to Senior Matriculation program	-	-
Change to Non-matriculation program	19	22.89
Remaining in Junior Matriculation program	64	77.11
TOTAL	83 ^a	100

^aRecords concerning programs of nine students, included in Table VIII in this program, were not available.

A very small percentage of change of program of students was found in the Non-matriculation group from grade XI to grade XII. Only 3.78 per cent changed to the Junior Matriculation program while 96.22 per cent remained in the same program. This is shown in Table XV.

TABLE XV

CHANGE OF PROGRAM OF STUDENTS IN NON-MATRICULATION
PROGRAM FROM GRADE XI TO GRADE XII. VICTORIA
COMPOSITE HIGH SCHOOL, EDMONTON

Characteristics	Number of Students	Per Cent
Change to Senior Matriculation program	-	-
Change to Junior Matriculation program	9	3.78
Remaining in Non-matriculation program	229	96.22
TOTAL	238	100

Discussion Concerning Change of Program.

Change of program of students is the main criterion used in this study to consider the efficiency of the selection methods and procedures of the composite high school. It was hypothesized that if methods and procedures of selection of students were appropriate, percentage of change of program should be quite low.

Change of program of students may come from many causes or factors. If a student is allowed to try and program according to his interests and needs, regardless of his ability, he may find difficulties in the program which may force him to change to another program. Selection practices of the school by setting admission requirements for the programs is one of the precautions to prevent needless change of program and failure. Needs, interests, and attitudes of students concerning programs of study are factors which cause change of program. Career goals along with parents' attitudes and preference may be considered to be factors in change of program of individual students as well.

In estimating the efficiency of the selection practice of the school, it is assumed that in general, all aspects or factors mentioned above were taken into account and precautions were made by the school authorities for sound selection practice. Thus, with respect to the reasons for or factors of change of program, the following discussions and

observations are made regarding the efficiency of the selection methods and procedures of the school.

Change of program of students in the Senior Matriculation program from grade X to grade XI was found to be not so large. This may be due to the fact that those who changed to the Junior Matriculation program did so because of their own inability to cope with the Senior Matriculation program. When they found that they would not complete the matriculation requirement within three years, then changes were made. Change to the Non-matriculation program might be considered as students' needs and interests changed. Selection of students for the Matriculation program, considering the admission requirements of the programs, is likely to be appropriate since only 17.32 per cent of students changed to the less demanding programs while 82.68 per cent remained.

Percentage of change of program from the Junior Matriculation to the Non-matriculation program was found to be quite large (25.87 per cent). This may be because the admission requirements used for screening students for Junior Matriculation program were too low and the subject matter of the program too difficult for those who had 2 A's and 4 B's in grade IX departmental examinations. In another sense, it could be hypothesized that inadequacy of the provisions before registration, e.g., guidance program or student orientations for registration, might exist.

Comparing change of program in the Non-matriculation

program with the Matriculation program, it is found that only 5.39 per cent changed to the Junior Matriculation and 2.49 per cent changed to the Senior Matriculation program. This might be accounted for by the fact that admission requirements for this program set by the school were so low and clear that few students could change to other more demanding programs. Possibly the programs offered were found beneficial by students and the programs themselves were interesting.

Summing up from evidence of change of program in two main programs, the Matriculation and the Non-matriculation programs, it was found that changes from the Matriculation to the Non-matriculation program and from the Non-matriculation to the Matriculation program both from grade X to grade XI and from grade XI to grade XII were very low. Table XVI shows the comparison between change of program from grade X to grade XI and from grade XI to grade XII.

TABLE XVI

DISTRIBUTION OF PERCENTAGE OF CHANGE OF PROGRAM BY GRADES

Program	Percentage of change from grade X to XI	Percentage of change from grade XI to XII
<u>Matriculation</u>		
a. Changed to Non-matriculation	16.96	10.55
b. Remaining	83.04	89.45
<u>Non-matriculation</u>		
a. Changed to Matriculation	7.88	3.78
b. Remaining	92.12	96.22

III. SCHOOL ATTENDANCE

School attendance of students included in this study was taken from the attendance records available at the school by means of student permanent record cards or cumulative record cards. Analysis of data concerning school attendance of students was made by means of averages.

Average attendance of students in the Matriculation and the Non-matriculation programs was found to be slightly different. Table XVII shows the school attendance average of students in all programs in grade X. Average of school attendance of students in the Senior and Junior Matriculation programs were 178.7 and 178.0 days per school year, while the Non-matriculation program students had an average of 175.7 days.

Table XVIII shows the average of school attendance of students in grade XI. Difference in the average attendance was found between the Matriculation and the Non-matriculation students. The Senior and Junior Matriculation students had averages of 177.5 and 174.2 days per school year, while the Non-matriculation students had an average of 172.0 days per school year.

Averages of school attendance of students in grade XII were taken from the beginning of school year of 1967-68 up to the end of March, 1968. Table XIX shows that the students in the Senior and Junior Matriculation programs had averages of 125.8 days and 119.9 days, respectively, while students in the Non-matriculation program had an average of 118.4 days.

TABLE XVII
AVERAGE SCHOOL ATTENDANCE OF STUDENTS IN GRADE X
SCHOOL YEAR 1965-1966

Program	Number of Students	Average No. of Days in Attendance
Senior Matriculation	130	178.7
Junior Matriculation	97	178.0
Non-matriculation	244	175.7
Total	471 ^a	177.5
Average actual number of days in school year 1965-1966		179.0

^aAttendance records of one student in the Non-matriculation program were not available.

TABLE XVIII
AVERAGE SCHOOL ATTENDANCE OF STUDENTS IN GRADE XI
SCHOOL YEAR 1966-1967

Program	Number of Students	Average No. of Days in Attendance
Senior Matriculation	116	177.5
Junior Matriculation	92	174.2
Non-matriculation	261	172.0
Total	469 ^a	174.6
Average actual number of days in school year 1966-1967		178.3

^aAttendance records of three students in the Non-matriculation program were not available.

TABLE XIX

AVERAGE SCHOOL ATTENDANCE OF STUDENTS IN GRADE XII
SEPTEMBER 1967 - MARCH 1968

Program	Number of Students	Average No. of Days in Attendance
Senior Matriculation	86	125.8
Junior Matriculation	99	119.9
Non-matriculation	251	118.4
Total	436 ^a	121.3
Total possible days		130.0

^aSchool attendance records of three students in the Junior Matriculation and three in the Non-matriculation programs were not available.

TABLE XX

AVERAGE SCHOOL ATTENDANCE OF STUDENTS
IN GRADES X, XI, AND XII

Program	Grade		
	X	XI	XII
Senior Matriculation	178.7	177.5	125.8
Junior Matriculation	178.0	174.2	119.9
Non-matriculation	175.7	172.0	118.4
Total Average	177.5	174.6	121.3
Average Actual Number of Days	179.0	178.3	130.0 ^a

^aTotal possible days (average actual attendance not available for a partial year).

Discussion Concerning School Attendance.

School attendance is one of the criteria, although it may not be a major one, in considering the efficiency of selection practice of the school. It was assumed, first, that school attendance of students in the programs which were not suited to their needs, interests, and ability was likely to be low. If the selection methods and procedures were appropriate it would help students to select suitable programs. As a result, the students could keep up with the programs they had chosen at the beginning of the school term by giving all efforts for study including school attendance.

Findings of the investigation of school attendance of the sample students revealed differences in average school attendance between students in the Matriculation and the Non-matriculation programs. The students in the Matriculation program had a higher average school attendance than those in the other programs. Difference in school attendance and low average attendance of the Non-matriculation program students may be considered in relation to the efficiency of selection practice and other related aspects.

Average attendance of the students in the Non-matriculation program, which was lower than those in the Matriculation program, support the assumptions maintained by the school and previous studies. Requirements for the Non-matriculation program, which were low and provided more choices than the others, may not be taken as causes of low school

attendance.

By comparing school attendance averages of students in the school with the average of the entire school system of the Province of Alberta, it was found that both averages were relatively the same in the school year of 1965-1966 and 1966-1967. In the school year of 1965-1966, average school attendance of the entire school system was 179.03 days,¹ while average of all grade X students was 177.50. In this school year the Matriculation program students had an average of 178.35 days. In the school year of 1966-1967, average attendance of the entire school system was 178.32,² while all grade XI students in the school had an average of 174.60 days. The students in the Matriculation program in this school year had an average of 175.85 days and the students in the Non-matriculation program had an average of 172.0 days.

The efficiency of selection practice, in general, by considering school attendance of students as a criterion and with respect to other related aspects concerning school attendance of students in the high school, is considered to be high since the average school attendance of students in each program was not low in comparison with the average of the school and with the average of the entire school system.

¹Sixty-first Annual Report of the Department of Education of the Province of Alberta, 1966 (Edmonton: Queen's Printer for Alberta, 1967), p. 214.

²Sixty-second Annual Report of the Department of Education of the Province of Alberta, 1967 (Edmonton: Queen's Printer for Alberta, 1968), p. 211.

IV. HIGH SCHOOL ACHIEVEMENT

An investigation of high school achievement of the students included in this study was made to determine the percentage of students who were most likely to complete and who were not likely to complete high school education within the period of three years. Limitations of this part of the investigation are:

1. Determination of achievement of the students was made within the limit of three years in high school (1965-1966 - 1967-1968) from which they could earn high school diplomas.

2. Achievement was based on the Grade XII Easter examination marks. Judgment of achievement by using these marks as the basis was considered to be reliable as a result of the findings of the sub-study concerning the correlations between the Easter and the final marks.

3. The grade XII student sample included only those proceeding from the original group in grade X. Analyzed data of these students included only those who remained up to grade XII and those whose records and data were available.

The number of students from the original group at the beginning of grade XII was 442. The number appearing at the time of the 1968 Easter examinations was 414. The missing number of 26 was assumed to be drop-outs or transfers, and were not included.

Judgment of achievement of the student sample, as

stated in Chapter III, was made by following the practice of the school and regulations set by the provincial Department of Education. The criteria used in the judgment of achievement include the total number of cumulative credits, compulsory course requirements, and marks of individual subjects for each student.

Table XXI shows the number and percentage of the students who were classified as most likely and not likely to complete high school education. Group I represents the group of students who were most likely to complete education while group II represents the group of students who were classified as not likely to complete high school education. Of 414 original grade XII students who remained from grade X, 328 or 79.23 per cent were classified as those in group I and 86 or 20.77 per cent were in group II.

TABLE XXI

DISTRIBUTION OF STUDENTS IN PROGRAMS BY
ACHIEVEMENT GROUPS AS AT APRIL, 1968

Group	Program		No.	Per Cent
	Matric.	Non-matric.		
I	154	174	328	79.23
II	24	62	86	20.77
TOTAL	178	236	414	100

Table XXII shows the number and percentage of the achievement groups according to the programs. Of 328 students who were most likely to complete high school at the end of grade XII, 154 or 46.95 per cent were in the Matriculation program and 174 or 53.05 per cent were in the Non-matriculation program. In the group of 86 students who were not likely to complete education, 24 or 27.91 per cent were in the Matriculation program while 62 or 72.09 per cent were in the Non-matriculation program.

TABLE XXII

DISTRIBUTION OF STUDENTS IN ACHIEVEMENT
GROUPS BY PROGRAMS

Program	Group I		Group II	
	No.	Per Cent	No.	Per Cent
Matriculation	154	46.95	24	27.91
Non-matriculation	174	53.05	62	72.09
TOTAL	328	100	86	100

School attendance is one of the characteristics about which observations can be made concerning achievement of the two groups of students. Table XXIII shows the average attendance of the two achievement groups. It was found that group I had an average of 120.4 days in grade XII, while group II had an average of 116.9 days.

TABLE XXIII

DISTRIBUTION OF STUDENTS IN ACHIEVEMENT GROUPS
BY AVERAGE ATTENDANCE IN GRADE XII

Group	Number of Students	Average No. of Days in Attendance
I	328	120.4
II	86	116.9
Total	414	118.6
Total possible days-- September, 1967--March, 1968		130.0

Discussion Concerning High School Achievement.

From the analysis of data concerning high school achievement of the selected group of students, it was found that the majority of grade XII students in the school year 1967-1968 were those who were likely to complete education in that school year. When categorized by programs, it was found that percentage of achievement of students in the Matriculation program was higher than in the Non-matriculation program. The students who were most likely to complete high school had a higher average school attendance.

It may be concluded, in observing the high percentage of high school students considered most likely to complete high school education, that the selection practices of the schools as a whole are efficient. Requirements for the Matriculation program are considered to be high or reasonable enough so that there was a high percentage of students in the program who were most likely to complete high school. Percentage of students in the Non-matriculation program who were most likely to complete education was high enough to support the position that selection for that program was efficient.

CHAPTER VI

SUMMARY, CONCLUSIONS, AND IMPLICATIONS

I. SUMMARY

The provision for education in any society is made according to the philosophy that schools or school systems are created and education is made available to the community within the framework of the demands of society. Practices in accomplishing this ideal have been developed and carried on to the extent that every child has an opportunity to learn and develop.

The establishment of the comprehensive or composite secondary school is a process by which the ideal of education for all will be furthered, since, according to its nature and purposes, the school offers a wide range of programs and educational opportunities for children with various levels of ability, needs, and interests.

This study was an attempt to focus on the ideals and the practices of the comprehensive or composite high school in the area of selection of students. The reason for conducting the study was the fact that when the school offers more choices of opportunity for education, problems and dilemmas would be faced by the school administration in getting students into suitable programs. Thus, the study was an attempt to investigate the methods and procedures of selection practices of the composite high schools in the city of

Edmonton. Another attempt is also made to estimate the efficiency of these selection methods and procedures.

Information concerning selection practices was collected from ten composite high schools in the city of Edmonton by means of interviews. Data of the selected group of students included in the second part were collected from one composite high school. The organization of information about selection practices and analysis of data regarding efficiency of selection practices are summarized in the following:

Selection Practices.

By means of an interview schedule, information was collected from principals or assistant principals of Bonnie Doon, Strathcona, Queen Elizabeth, Harry Ainlay, Eastglen, McNally, Ross Sheppard, St. Joseph's, Victoria, and Jasper Place composite high schools.

Provisions before registration. It was found from the interviews that provisions, for helping students before registration in the senior high school, concerning registration and selection of program were made by all senior high schools. These provisions included meetings between the senior and junior high school administrators and counsellors, meetings with students in the junior high schools, and meetings with parents.

The purpose of the provisions, the schools maintained, was to inform the junior high schools, students, and parents

concerning the school policy, school programs, requirements for particular programs, selection of the programs, and opportunities for education in the senior high schools. The main purpose of the provisions seems to be helping students in selection of programs of study. Frequency of each provision, reported by almost all schools, was once a year before the preliminary registration.

Registration. Registration in the senior high school was divided into two parts. (1) Preliminary registration was practiced in all senior high schools included in this study. The basic practice was to provide for students in selecting their programs on the basis of the Easter marks preliminary to the actual registration. The purpose of this preliminary registration was presumably for the convenience of the school administration in arranging for school operation in the coming year. The provision also allowed students adequate time for selection of their programs of study in the senior high school. (2) The actual registration for senior high school was generally made after the final Departmental Grade IX marks were received. The students who had preliminarily registered or who had filled out the forms in the preliminary registration were asked to register on the date announced by the senior high schools. The programs of students were made permanent on the basis of the final marks.

Student choices of programs. Choices of programs of students in the senior high school were made basically on

past achievement. For students entering grade X, the grade IX marks were ^{the} major consideration from which choices of programs would be made possible. Each school set its requirements for particular programs and made these known to students. Requirements for particular programs of all senior high schools were generally the same except for some additional requirements according to the discretion of school authorities.

Change of programs. Provision was made by all senior high schools for students to change their programs. The students could change their programs after the preliminary registration up to the end of August according to their preferences or needs. Permission to change was also given after the actual registration. Change of program after the beginning of the school term was allowed up to the middle of September or within the first two weeks after the beginning of the school term. Authorization of student programs and change of programs was basically left to the responsibility of the assistant principal who worked as grade coordinator in almost all schools.

Efficiency of Selection Practices.

The criteria used to estimate the efficiency of selection methods and procedures were change of program, school attendance, and high school achievement. The sample included only those students remaining in the school from grade X to grade XII.

Program enrollment. In the analysis of the selected group of students in program enrollment by means of percentage, it was found that, in grade X, 227 out of 472 students or 48.09 per cent enrolled in the Matriculation program while 245 or 51.91 per cent enrolled in the Non-matriculation program. In grade XI, where total enrollment was 471, 44.16 per cent were in the Matriculation program and 55.84 per cent were in the Non-matriculation program. Of the total number of 442 students in grade XII, 42.54 per cent enrolled in the Matriculation program while 57.46 per cent were in the Non-matriculation program.

Change of program. Percentage of sample students changing program was found not too large in every grade level. Changes at grade XI level were found to be greater than at the grade XII level. Percentages of change of program from grade X to grade XI are summarized as follows: from Senior Matriculation to Junior Matriculation program, 9.45 per cent; from Senior Matriculation to Non-matriculation program, 7.89 per cent; from Junior Matriculation to Senior Matriculation program, 5.15 per cent; from Junior Matriculation to Non-matriculation program, 28.87 per cent; from Non-matriculation to Senior Matriculation program, 2.49 per cent; from Non-matriculation to Junior Matriculation program, 5.39 per cent. Percentages of change of programs from grade XI to grade XII are as follows: from Senior Matriculation to Junior Matriculation program, 24.14 per cent; from Senior

Matriculation to Non-matriculation program, 1.72 per cent; from Junior Matriculation to Non-matriculation program, 22.89 per cent; from Non-matriculation to Junior Matriculation program, 3.78 per cent. No change of program was found from Junior Matriculation and Non-matriculation programs to the Senior Matriculation program at grade XII level.

School attendance. Average school attendance of students in the Senior Matriculation program was found higher than in the other programs at all grade levels. In grade X, where total average attendance among the group was 177.5 days per school year, average attendance of students in the Senior Matriculation program was 178.7 while the students in the Junior Matriculation and Non-matriculation programs had averages of 178.0 and 175.5 days, respectively. In grade XI, average attendance of Senior Matriculation program students was 177.5 while the students in the Junior Matriculation and Non-matriculation had averages of 174.2 and 172.0 days. The differences were found also in grade XII. The students in the Senior Matriculation program had an average of 125.8 days while the Junior Matriculation and Non-matriculation program students had averages of 119.9 and 118.4 days.

High school achievement. It was found, in studying the group of students originally registered in grade X and remaining through grade XII, that 328 out of 414 students or 79.23 per cent were classified as most likely to complete

while 86 or 21.73 per cent were classified as not likely to complete high school education within the period of three years. In considering achievement of students by programs, it was found that the students in the Matriculation program had a higher percentage of achievement (86.52) than those in the Non-matriculation program (73.73).

When taking average school attendance as one of the characteristics of the achievement groups, it was found that the students who were most likely to complete high school had higher average school attendance than those who were not likely to complete high school education at the end of the school year 1967-1968.

II. CONCLUSIONS

This study attempted to investigate the methods and procedures in selection practices in Edmonton composite high schools and to estimate the efficiency of these practices. General conclusions, based upon the interviews and analysis of student data, are noted below:

Conclusions Concerning Selection Practices.

1. Provisions before registration concerning meetings between the senior and junior high school administrators and counsellors, meetings with the students in the junior high schools, meetings with parents, and the distribution of senior high school registration handbooks were generally made by all senior high schools. These provisions were considered

important in helping students for registration and selection of senior high school programs.

2. Preliminary registration was practiced by all senior high schools. This practice was found to be important and reasonable for both students and school administrators.

3. The provision made for students in selecting tentative programs on the basis of the Easter marks or other pre-departmental examination marks, as practised and maintained by all senior high schools, was found to be appropriate since only a small proportion of changes were found when final marks were used as bases for the permanent programs.

4. Requirements for particular programs were found relatively the same in all senior high schools. These requirements were close to those suggested by the Edmonton Public School Board. Requirements for high school programs were considered to be reasonable since, according to the findings of Part II of this study, there was a low percentage of change of programs and a high percentage of high school success.

5. Permission for students to change their programs was found in every senior high school. This provision was considered to be reasonable since, according to the previous studies, there are many factors that cause change of program of study such as influence from the peer group, parents, teachers, and maturity in making educational and vocational choices.

Conclusions Concerning the Efficiency of Selection Practices.

1. It was found, in studying the selected group of students in Part II, that of the total enrollment in grade X, 73.71 per cent were retained up to grade XII. Percentages of enrollment in the Matriculation and the Non-matriculation programs was relatively the same in grade X. Enrollment in the Non-matriculation program was slightly higher than in the Matriculation program in grade XI and grade XII. It was concluded, with reference to enrollment data, that students in the Matriculation program changed to the Non-matriculation program when they did not meet the requirements or they met difficulties in their studies in the Matriculation program.

2. Percentage of change of program was found to be relatively low in each grade level. Change from the Matriculation to the Non-matriculation program was 16.96 per cent in grade XI, and 10.55 per cent in grade XII. Changes from the Non-matriculation to the Matriculation program was 7.88 per cent in grade XI, and only 3.78 per cent in grade XII. This finding supports the assumption maintained by almost all senior high schools that change of program of the whole schools ranged from 10.00 per cent to 20.00 per cent. Selection practices, by using change of program as the major criterion, were considered to be efficient.

3. Average school attendance of students in the Matriculation program was found slightly higher than those in the Non-matriculation program. This finding supports the

assumption held by the schools and previous studies that students in the Non-matriculation program had poorer school attendance. Efficiency of selection practices by using evidence of school attendance as a criterion, although it was not a major one, was still considered high since attendance of the whole group was considered high and averages of the two groups were not much different.

4. In determining high school achievement of the selected group of students in Part II by using Easter marks as criteria, it was found that the majority (79.23 per cent) was classified as most likely to complete high school by the end of the school year 1967-1968. Selection practices, by using evidence of high school achievement as a criterion, was considered to be efficient.

III. IMPLICATIONS

Some of the findings in this investigation have general implications for administrative practices in the composite high schools in this system: It is implied that provisions made by the cooperation between the senior and junior high schools in helping students or preparing students for registration and selection of senior high school programs are appropriate and should be continued.

Opportunity for education or for particular routes or programs of study in the senior high school depends basically on students' abilities or past achievement, especially in the

more demanding programs. Needs and interests of students seem to be considered mainly in the vocational subject areas.

It is implied, concerning the ideal of universal secondary education, that since the school offers a wide range of programs for students to choose according to their abilities, needs, and interests, and provisions are made to some reasonable extent for students to obtain some particular requirements, e.g., the matriculation requirement is more than three years, the ideal of universal secondary education is considered to be furthered.

It is also implied, for any school system with differences in administrative structure wishing to adopt the practices from the Edmonton model, that some modifications may be needed. Methods and procedures of selection practices which will be beneficial may require study in a particular setting.

IV. IMPLICATIONS FOR FURTHER STUDY

Some possible areas for further study arise from this investigation:

1. As the junior high schools offer exploratory courses which seem to provide for students to explore their needs, interests, or aptitudes for particular areas of vocations, further study might be conducted to investigate the advantages of Junior Exploratory programs in relation to senior high school education.

2. It was found in this study that a number of students were missing from the list of the selected group of students in Part II. Since no effort was made to follow-up these missing students, a further study should be focused on this group of students to investigate what type of education they obtained or what occupations they followed after leaving the high school at particular levels.

3. A further follow-up study should be conducted to investigate the advantages of the composite high school for the group of students who have completed Business and Technical programs to determine whether they enter occupations or take further education.

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THE UNIVERSITY OF CHICAGO
 DIVISION OF THE PHYSICAL SCIENCES
 DEPARTMENT OF CHEMISTRY

Name of compound		Molecular weight	Boiling point, °C
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199	Acetic acid (285% water)	60.05	118.1
200	Acetic acid (286% water)	60.05	118.1
201	Acetic acid (287% water)	60.05	118.1
202	Acetic acid (288% water)	60.05	118.1
203	Acetic acid (289% water)	60.05	118.1
204	Acetic acid (290% water)	60.05	118.1
205	Acetic acid (291% water)	60.05	118.1
206	Acetic acid (292% water)	60.05	118.1
207	Acetic acid (293% water)	60.05	118.1
208	Acetic acid (294% water)	60.05	118.1
209	Acetic acid (295% water)	60.05	118.1
210	Acetic acid (296% water)	60.05	118.1
211	Acetic acid (297% water)	60.05	118.1
212	Acetic acid (298% water)	60.05	118.1
213	Acetic acid (299% water)	60.05	118.1
214	Acetic acid (300% water)	60.05	118.1
215	Acetic acid (301% water)	60.05	118.1
216	Acetic acid (302% water)	60.05	118.1
217	Acetic acid (303% water)	60.05	118.1
218	Acetic acid (304% water)	60.05	118.1
219	Acetic acid (305% water)	60.05	118.1
220	Acetic acid (306% water)	60.05	118.1
221	Acetic acid (307% water)	60.05	118.1
222	Acetic acid (308% water)	60.05	118.1
223	Acetic acid (309% water)	60.05	118.1
224	Acetic acid (310% water)	60.05	118.1
225	Acetic acid (311% water)	60.05	118.1
226	Acetic acid (312% water)	60.05	118.1
227	Acetic acid (313% water)	60.05	118.1
228	Acetic acid (314% water)	60.05	118.1
229	Acetic acid (315% water)	60.05	118.1
230	Acetic acid (316% water)	60.05	118.1
231	Acetic acid (317% water)	60.05	118.1
232	Acetic acid (318% water)	60.05	118.1
233	Acetic acid (319% water)	60.05	118.1
234	Acetic acid (320% water)	60.05	118.1
235	Acetic acid (321% water)	60.05	118.1
236	Acetic acid (322% water)	60.05	118.1
237	Acetic acid (323% water)	60.05	118.1
238	Acetic acid (324% water)	60.05	118.1
239	Acetic acid (325% water)	60.05	118.1
240	Acetic acid (326% water)	60.05	118.1
241	Acetic acid (327% water)	60.05	118.1
242	Acetic acid (328% water)	60.05	118.1
243	Acetic acid (329% water)	60.05	118.1
244	Acetic acid (330% water)	60.05	118.1
245	Acetic acid (331% water)	60.05	118.1
246	Acetic acid (332% water)	60.05	118.1
247	Acetic acid (333% water)	60.05	118.1
248	Acetic acid (334% water)	60.05	118.1
249	Acetic acid (335% water)	60.05	118.1
250	Acetic acid (336% water)	60.05	118.1
251	Acetic acid (337% water)	60.05	118.1
252	Acetic acid (338% water)	60.05	118.1
253	Acetic acid (339% water)	60.05	118.1
254	Acetic acid (340% water)	60.05	118.1
255	Acetic acid (341% water)	60.05	118.1
256	Acetic acid (342% water)	60.05	118.1
257	Acetic acid (343% water)	60.05	118.1
258	Acetic acid (344% water)	60.05	118.1
259	Acetic acid (345% water)	60.05	118.1
260	Acetic acid (346% water)	60.05	118.1
261	Acetic acid (347% water)	60.05	118.1
262	Acetic acid (348% water)	60.05	118.1
263	Acetic acid (349% water)	60.05	118.1
264	Acetic acid (350% water)	60.05	118.1
265	Acetic acid (351% water)	60.05	118.1
266	Acetic acid (352% water)	60.05	118.1
267	Acetic acid (353% water)	60.05	118.1
268	Acetic acid (354% water)	60.05	118.1
269	Acetic acid (355% water)	60.05	118.1
270	Acetic acid (356% water)	60.05	118.1
271	Acetic acid (357% water)	60.	

APPENDIX A

DISTRIBUTION OF COMPOSITE HIGH SCHOOLS
BY ENROLLMENT AND STAFF MEMBERS
SCHOOL YEAR 1967-68

No.	School	Enrollment	No. of Staff
1	Bonnie Doon	1,630	78
2	Strathcona	1,250	61
3	Queen Elizabeth	1,615	80
4	Harry Ainlay	1,275	74
5	Eastglen	1,130	60
6	McNally	840	41
7	Ross Sheppard	1,830	90
8	St. Joseph's	1,620	80
9	Victoria	2,240	123
10	Jasper Place	2,000	120

INTERVIEW SCHEDULE

Note: The following questions were used as guidelines in interviewing the senior high school principals or assistant principals. Space was provided following each question in the working copy.

I. School Enrollment and Programs.

1. What is the school enrollment?
2. How large is the school staff?
3. What programs are offered in the school?
4. What are non-academic subjects offered in your school?
5. Can you calculate the percentage of students in the matriculation and non-matriculation programs?

II. Registration and Selection.

1. Does the school send the administrators or counsellors to the feeder schools for orientation of registration and selection of programs of the student?
2. What are the procedures of this program?
3. When is this provision made?
4. Do you provide for the students a chance to talk with their parents concerning their programs of study before registration?
5. When do you provide for the preliminary registration?
6. What are criteria for setting up a tentative program of a student?
7. When are the preliminary registration forms received?
8. When is the permanent program of a student set up?
9. What are criteria used for a student's permanent program?

10. Who authorizes or approve the permanent program of an individual student?
11. Do you allow, in actual practice, students with lower standings than the criteria or requirements for each program to try the program on their preference?

III. Change of Program.

1. Do you allow change of program of students when their programs have been set up?
2. To what extent are change of programs allowed?
3. What is the deadline of change of program of students?
4. How large is change of program of students in your school?
5. Who authorizes the change of program of a student?

IV. Problems and Opinion.

1. Do you have any problems or dilemmas in selection of students?
2. Do you think the requirements for the programs set by the school or those — suggested by the school board reasonable?
3. Do you think the Easter marks, in **connection** with change of program, valid criteria for the tentative program of students?
4. What are your major problems in school operation?
5. What is your general opinion concerning the composite high school?

APPENDIX B

1967 - 1968 REGISTRATION FORM

VICTORIA COMPOSITE HIGH SCHOOL

FOR STUDENTS ENTERING GRADE TEN

10310 - 108 AVE.

EDMONTON, ALBERTA

424 - 2641

1		SURNAME		FIRST NAME		SECOND NAME		ADDRESS		FOR OFFICE USE ONLY	
3		TELEPHONE NUMBER		DATE OF BIRTH		FEMALE ☐ MALE ☐		RESIDENT ☐ NON-RESIDENT ☐		STUDENT NO.	
7		SCHOOL ATTENDED DURING 1966-67		CODE		H.R.		DATE OF REGISTRATION		PROGRAM NO.	
11		FATHER'S NAME		ADDRESS		BUSINESS TELEPHONE		IS EITHER PARENT ROMAN CATHOLIC (for tax purposes) YES ☐ NO ☐		HOME ROOM	
13		MOTHER'S NAME		ADDRESS		BUSINESS TELEPHONE		ACCUMULATED CREDITS TO DATE		DEPT. OF ED. NO.	
15		GRADE NINE PROGRAM		PROPOSED GR. X PROGRAM ON BASIS OF EASTER MARKS		COURSE NO.		CREDIT VALUE		APPROVED PROGRAM	
		READING		ENGLISH		5		5		ENGLISH	
		LITERATURE		SOCIAL STUDIES		5		5		SOCIAL STUDIES	
		LANGUAGE		PHYSICAL EDUCATION		10		5		PHYSICAL EDUCATION 10	
		SOCIAL STUDIES		MATHEMATICS		5		5		MATHEMATICS	
		MATHEMATICS		SCIENCE		5		5		SCIENCE	
		SCIENCE		ELECTIVES		1.					
		FRENCH				2.					
		TYPEWRITING				3.					
		HOME ECONOMICS OR INDUSTRIAL ARTS		GENERAL TECH						GENERAL TECH	
TOTAL STANINE				TOTAL CREDITS				TOTAL CREDITS		DATE PROCESSED BY IBM	
18		TYPE OF PROGRAM		19		20		COUNSELOR'S SIGNATURE		ADMINISTRATOR'S SIGNATURE	
		☐ BUSINESS ☐ 4 YR. MATRIC ☐ GENERAL ☐ 3 YR. MATRIC ☐ TECH.-VOC.		STUDENT'S SIGNATURE		PARENT'S SIGNATURE		DATE		DATE	

COMMENTS

—KEYSORT CODE—		REGISTRATION FORM		—KEYSORT CODE—	
TECHNICAL-VOCATIONAL AUTOMOTIVES 1 BLDG. CONSTRUCT'N 2 DRAFTING 3 ELECTRICITY 4 ELECTRONICS 5 MACHINE SHOP 6 PIPE TRADES 7 SHEET METAL 8 WELDING 9		PICTURE VICTORIA COMPOSITE HIGH SCHOOL EDMONTON, ALBERTA 10210-108 AVE. 429-2641		PICTURE PERFORMING & VISUAL ARTS COMMERCIAL ART 1. GRAPHIC ART 2. PERFORMING ARTS 3.	
1	STUDENT NO.	2	PROGRAM NO.	3	
4	HOME ROOM	5	GRADE	6	SURNAME GIVEN NAME
7	TELEPHONE NUMBER			8	RELIGION ROMAN CATHOLIC ☐ PROTESTANT ☐ OTHER ☐
10	SCHOOL PRESENTLY ATTENDING			9	MALE ☐ FEMALE ☐
	SCHOOL FROM			11	RESIDENT ☐ NON-RESIDENT ☐
13	BIRTH DATE DAY MONTH YR.	14	REGISTRATION DATE DAY MONTH YR.	12	ACCUMULATED CREDITS
15	FATHER'S NAME		16	FATHER'S ADDRESS BUSINESS TELEPHONE	
17	MOTHER'S NAME		18	MOTHER'S ADDRESS BUSINESS TELEPHONE	
19	POST HIGH SCHOOL PLANS UNIVERSITY ☐ INSTITUTE OF TECHNOLOGY ☐ APPRENTICESHIP ☐ DIRECT EMPLOYMENT ☐ OTHER ☐ FACULTY PROGRAM TRADE				
20	SPECIAL MEDICAL INFORMATION				
TEST DATA			ATTENDANCE		
21	COMMENTS:		25	STUDENT MASTER CARD	
				ADDRESS CARD	
				TIMETABLE	
22	COMMENTS:		26	STUDENT MASTER CARD	
				ADDRESS CARD	
				TIMETABLE	
23	COMMENTS:		27	STUDENT MASTER CARD	
				ADDRESS CARD	
				TIMETABLE	
24	COMMENTS:		28	STUDENT MASTER CARD	
				ADDRESS CARD	
				TIMETABLE	

Junior High School

GRADE X REGISTRATION 1967-68

BONNIE DOON COMPOSITE HIGH SCHOOL

Boy

Girl

NAME

Last

First

Middle

Age

ADDRESS

TELEPHONE

PLANS FOR 1967-68

Attend BONNIE DOON

OTHER SCHOOL
(NAME)

Check one square,
or fill in

→ OTHER PLANS

GRADE X AT BONNIE DOON

PROGRAM

ELECTIVES

- 3SM ☐ 1. _____
- 3JM ☐ 2. _____
- 4SM ☐ 3. _____
- 3BEB ☐ 4. _____
- 3BES ☐ _____
- 3G ☐ _____
- 3T ☐ _____

FOR OFFICE USE

Grade IX Record	Pre- dictive	Departmental	
		Letter Grd.	Stanine
Reading			
Literature			
Language			
Social Studies			
Mathematics			
Science			
AVERAGE			
Stanine Total			
Percentile			

Parent's Approval of Courses Selected

Signature of Parent

COUNSELLOR'S COMMENTS:

F

1. ☐ _____
2. ☐ _____
3. ☐ _____
4. ☐ _____
5. ☐ _____
- ☐ _____

M

APPENDIX C

Description		Unit	Quantity	Amount
Item 1	100	100	1	100
Item 2	200	200	2	200
Item 3	300	300	3	300
Item 4	400	400	4	400
Item 5	500	500	5	500
Item 6	600	600	6	600
Item 7	700	700	7	700
Item 8	800	800	8	800
Item 9	900	900	9	900
Item 10	1000	1000	10	1000
Item 11	1100	1100	11	1100
Item 12	1200	1200	12	1200
Item 13	1300	1300	13	1300
Item 14	1400	1400	14	1400
Item 15	1500	1500	15	1500
Item 16	1600	1600	16	1600
Item 17	1700	1700	17	1700
Item 18	1800	1800	18	1800
Item 19	1900	1900	19	1900
Item 20	2000	2000	20	2000
Item 21	2100	2100	21	2100
Item 22	2200	2200	22	2200
Item 23	2300	2300	23	2300
Item 24	2400	2400	24	2400
Item 25	2500	2500	25	2500
Item 26	2600	2600	26	2600
Item 27	2700	2700	27	2700
Item 28	2800	2800	28	2800
Item 29	2900	2900	29	2900
Item 30	3000	3000	30	3000
Item 31	3100	3100	31	3100
Item 32	3200	3200	32	3200
Item 33	3300	3300	33	3300
Item 34	3400	3400	34	3400
Item 35	3500	3500	35	3500
Item 36	3600	3600	36	3600
Item 37	3700	3700	37	3700
Item 38	3800	3800	38	3800
Item 39	3900	3900	39	3900
Item 40	4000	4000	40	4000
Item 41	4100	4100	41	4100
Item 42	4200	4200	42	4200
Item 43	4300	4300	43	4300
Item 44	4400	4400	44	4400
Item 45	4500	4500	45	4500
Item 46	4600	4600	46	4600
Item 47	4700	4700	47	4700
Item 48	4800	4800	48	4800
Item 49	4900	4900	49	4900
Item 50	5000	5000	50	5000
Item 51	5100	5100	51	5100
Item 52	5200	5200	52	5200
Item 53	5300	5300	53	5300
Item 54	5400	5400	54	5400
Item 55	5500	5500	55	5500
Item 56	5600	5600	56	5600
Item 57	5700	5700	57	5700
Item 58	5800	5800	58	5800
Item 59	5900	5900	59	5900
Item 60	6000	6000	60	6000
Item 61	6100	6100	61	6100
Item 62	6200	6200	62	6200
Item 63	6300	6300	63	6300
Item 64	6400	6400	64	6400
Item 65	6500	6500	65	6500
Item 66	6600	6600	66	6600
Item 67	6700	6700	67	6700
Item 68	6800	6800	68	6800
Item 69	6900	6900	69	6900
Item 70	7000	7000	70	7000
Item 71	7100	7100	71	7100
Item 72	7200	7200	72	7200
Item 73	7300	7300	73	7300
Item 74	7400	7400	74	7400
Item 75	7500	7500	75	7500
Item 76	7600	7600	76	7600
Item 77	7700	7700	77	7700
Item 78	7800	7800	78	7800
Item 79	7900	7900	79	7900
Item 80	8000	8000	80	8000
Item 81	8100	8100	81	8100
Item 82	8200	8200	82	8200
Item 83	8300	8300	83	8300
Item 84	8400	8400	84	8400
Item 85	8500	8500	85	8500
Item 86	8600	8600	86	8600
Item 87	8700	8700	87	8700
Item 88	8800	8800	88	8800
Item 89	8900	8900	89	8900
Item 90	9000	9000	90	9000
Item 91	9100	9100	91	9100
Item 92	9200	9200	92	9200
Item 93	9300	9300	93	9300
Item 94	9400	9400	94	9400
Item 95	9500	9500	95	9500
Item 96	9600	9600	96	9600
Item 97	9700	9700	97	9700
Item 98	9800	9800	98	9800
Item 99	9900	9900	99	9900
Item 100	10000	10000	100	10000

Total: 10000 units, 10000 amount

CORRELATIONS BETWEEN EASTER AND FINAL EXAMINATION
MARKS OF GRADE XII ACADEMIC SUBJECTS, 1966-67
VICTORIA COMPOSITE HIGH SCHOOL, EDMONTON

Subject	N	r	df	F Ratio
English 30	306	0.553 ^a	1	134.02
English 33	391	0.556 ^a	1	174.05
Mathematics 30	235	0.654 ^a	1	174.09
Mathematics 31	49	0.814 ^a	1	92.24
Mathematics 32	42	0.954 ^a	1	412.16
Mathematics 34	26	0.747 ^a	1	30.44
Mathematics X Trad 30	33	0.799 ^a	1	54.81
Physics 30	162	0.754 ^a	1	211.44
Chemistry 30	258	0.829 ^a	1	566.40
Biology 30	171	0.809 ^a	1	321.66
Biology 32	24	0.881 ^a	1	76.43
Social Studies 30	344	0.779 ^a	1	530.02
Social Studies Dip. 30	143	0.869 ^a	1	438.63
French 30	139	0.602 ^a	1	77.90
German 30	24	0.917 ^a	1	116.84
Latin 30	13	0.419	1	2.34

^aStatistically significant beyond 0.001 level.

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